



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,969	06/22/2001	Vinayak S. Ghaisas	020431.0777	7671

53184 7590 01/04/2006  
i2 TECHNOLOGIES US, INC.  
ONE i2 PLACE, 11701 LUNA ROAD  
DALLAS, TX 75234

EXAMINER

STERRETT, JONATHAN G

ART UNIT	PAPER NUMBER
----------	--------------

3623

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/887,969	<b>Applicant(s)</b> GHAISAS ET AL.	
	<b>Examiner</b> Jonathan G. Sterrett	<b>Art Unit</b> 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This **Final Office Action** is responsive to applicant's amendment filed November 2, 2005.

Currently **Claims 1-48** are pending.

### *Response to Arguments*

2. The applicant's arguments have been fully considered, but they are not persuasive.
3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., 'closed loop computerized management system provides for any input or even visibility to the customer") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
4. The applicant argues that Koski does not disclose "a resource capacity collaboration, comprising accessing an assignment of an item used in producing a product for a customer to a first resource of a factory in a first production period."

The examiner respectfully disagrees. Koski clearly teaches accessing the cube booking program to determine if there are available resources for producing a

component for a customer. Koski teaches that if the resources are not available (Koski does not limit to just one type of resource, but mentions several, e.g. floating resources, machine capacity) for a first production period that the customer order has to be rescheduled at least partly to a second production period. It would not be possible to determine if resources are available for producing a component in a first time period, as taught by Koski, without accessing an assignment of an item (i.e. in memory) used for producing a product.

5. The applicant argues that Koski does not disclose "accessing a capacity value representing a capacity of the first resource to process one or more items in the first production period."

The examiner respectfully disagrees. Koski teaches that determining available resources is performed by comparing demand versus availability and also using linear programming methods (see column 12 line 39-40). Both the comparison and linear programming methods would access a capacity value representing a capacity of the first resource to process one or more items in the first production period, to accomplish determining if the factory can process the part for the first time period.

6. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "selection of a workspace is in anyway associated with the capacity value") are not recited in the rejected claim(s). Although the claims are interpreted in light of the

specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. The applicant argues that Koski does not disclose "accessing a demand value representing a demand placed on the first resource in the first production period by the assignment of the item to the first resource."

The examiner respectfully disagrees. As noted above in accessing the capacity value, accessing the demand value is performed when the system makes a comparison between demand and supply when it determines if production can be scheduled for the first production period. Utilizing a linear programming method, as taught by Koski, would access both a demand and capacity value to efficiently match demand and capacity in scheduling the factory.

8. The applicant argues that Koski does not disclose "(1) automatically generating a notification if the demand value exceeds the capacity value; (2) automatically communicating the notification to a user associated with the customer; and (3) reassigning at least a portion of the demand placed on the first resource in the first production period to at least one of a second resource and a second production period."

The examiner respectfully disagrees. Koski clearly determines if a part can be scheduled in a factory based on a customer's first request by comparing the resource requirements of that part with the identified workflow path through the factory and the available resources to process the component according to that part. If the resources

are not available, a notification is automatically communicated to the customer (see column 12 line 51-55). The 'best can do' communication sent to the customer if the resources are not available as per the customer demand includes reassigning at least a portion of the demand to a second resource and a second production period, because the point of the automatic communication taught by Koski is that the initial request could not be met in terms of schedule.

9. The applicant has attempted to challenge the examiner's taking of Official Notice on page 30 paragraph 3; however, applicant has not provided adequate information or argument so that on its face it creates a reasonable doubt regarding the circumstances justifying the Official Notice. Therefore, the presentation of a reference to substantiate the Official Notice is not deemed necessary. The examiner's taking of Official Notice has been maintained.

The examiner would respectfully point out to the applicant that the concept of storing an access privilege and making access contingent on that privilege is old and well known in the art of computer security. For example, the Dictionary of Computers, Information Processing & Telecommunications, 2<sup>nd</sup> Edition, 1987, p. 456, defines a password (i.e. access privilege) as (1) a unique string of characters that a program, computer operator or user must supply to meet security requirements before gaining access to data (2) a code or signal, usually confidential, that enables its user to have full or limited access to a system.

10. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

11. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Debusk teaches providing a tree structure to denote resources used in customer fulfillment. Debusk and Koski both address tracking resources used to fulfill customer demand, thus both Debusk and Koski are analogous art. It would have been obvious to combine Debusk and Koski with a reasonable expectation of success since Debusk teaches that standardization resources using a tree structure results in lower inventory carrying costs (see column 5 line 25-30).

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. **Claims 1-11, 13, 15-25, 27, 29-39, 41, and 43-48** are rejected under 35 U.S.C. 102(b) as being anticipated by **Koski US 5,596,502**, hereinafter **Koski**.

Regarding **Claim 1**, Koski discloses:

**accessing an assignment of an item used in producing a product for a customer to a first resource of a factory in a first production period;**

column 12 line 5-9, orders coming into the system from the customer cause the system to access assignment of the features (i.e. item) into various resources of the factory (i.e. including a first resource) in a first production period –see column 12 line 35-36, factory resources are scheduled. (i.e. for a first production period)

**accessing a capacity value representing a capacity of the first resource to process one or more items in the first production period;**

column 12 line 24-27, determination of a path through the factory comprise accessing all the capacity values associated with resources necessary to produce the feature set. –column 12 line 35-36, these resources are scheduled (i.e. for a first production period)



**accessing a demand value representing a demand placed on the first resource in the first production period by the assignment of the item to the first resource;**

column 12 line 16-19, the system accesses a demand value to determine if resources are available to meet the demand for features (i.e. items) by accessing the customer order –column 12 line 35-36 the demand is scheduled (i.e. scheduled into the first production period).

**automatically generating a notification if the demand value exceeds the capacity value;**

column 12 line 51-55, a rich response is generated if the resources in the factory cannot meet the demand (i.e. demand value exceeds capacity value) for the time period requested by the customer order.

**automatically communicating the notification to a user associated with the customer; and**

column 12 line 51-55, this response is communicated to the customer by the system automatically – see column 12 line 47-50.

**reassigning at least a portion of the demand placed on the first resource in the first production period to at least one of a second resource and a second production period.**

column 12 line 53-55, the response to the customer includes a alternative delivery date which includes reassigning the original demand on production resources in the first time period to other resources in later time periods (i.e. second time period).

Regarding **Claim 2**, Koski discloses:

**wherein reassigning at least a portion of the demand comprises allowing the user associated with the customer to reassign at least a portion of the demand.**

column 20 line 53-56, the customer is contacted directly to reassign their demand into resources that are available to ensure the order (i.e. portion of the demand) can be delivered later. The contact includes the customer agreeing to the reassignment.

Regarding **Claim 3**, Koski discloses:

**the notification is also automatically communicated to at least one of a user associated with the factory and a user associated with a supplier;**

column 20 line 53-55, the customer order department (i.e. a user associated with the factory) is contacted automatically regarding inability to meet the customer order as requested.

column 13 line 51-56, The notifications provided when internal capacity cannot be met (when orders are considered endogenous to a parent company and its subsidiaries) are automatically communicated to an internal customer. Since the internal customer, the supplier and manufacturer are all part of the same organization, the notification is automatically provided to a user associated with all these at the same time.

**the reassignment is initiated by at least one of the user associated with the factory and the user associated with the supplier, respectively;**

column 12 line 64-65, a technician (i.e. user associated with the factory or with the parent organization as discussed above in column 13 line 51-56) can monitor the status of an order regarding resource-demand mismatches and reassignment of resources – see column 18 line 56-58, the system displays resource contentions (i.e. demand capacity mismatches) in red.

**the reassignment is to a second resource in the same factory if initiated by the user associated with the factory; and**

**the reassignment is to a second resource in another factory if initiated by the user associated with the supplier.**

The user mentioned in column 12 line 64-65 can reassign to a second resource in the same factory or another factory, since the cube world in the invention comprises an, column 13 line 48-51, organization consisting of several plants of which some may be vendors (i.e. suppliers). – see column 13 line 60-65, the cube world may encompass a parent and several child cubes (i.e. suppliers or vendors). Also a user, if associated with an internal order, is associated with the supplier and customer at the same time.

Regarding **Claim 4**, Koski discloses:

**allowing the user associated with the customer to reassign at least a portion of the demand to another supplier if a reassignment by the user associated with the factory and a reassignment by the user associated with the**

Art Unit: 3623

**supplier would both fail to resolve a demand-capacity mismatch associated with the assignment of the item to the first resource.**

column 13 line 51-55, since in a larger organization some orders are endogenous, that is they originate from within the cube-world system, the customer users having access to the system would access the system as described in claim 3 above to reassign demand should the user associated with the factory and user associated with the vendor (all inside the cube world) fail to remedy a demand-capacity mismatch by reassignment.

Regarding **Claim 5**, Koski discloses:

**wherein the demand value reflects a factoring value associated with processing the item using the first resource, the demand value equaling the factoring value multiplied by a nominal demand value representing a demand that would be placed on the first resource in processing a standard item.**

column 20 line 3-7, demand values are weighted (i.e. multiplied by a factoring value) depending on the path through the factory and thus reflect a factoring value associated with processing the item – i.e. the various manufacturing paths (i.e. for processing) are ranked using the factoring value to account for costs, ‘hassle factor’ and customer service– see also column 21 line 18-21, some paths may require additional quantities of certain resources.

Regarding **Claim 6**, Koski discloses:

**storing a requested capacity value representing a capacity of the first resource requested by the customer;**

column 11 line 52-54, the second memory provides for storage of requested capacity demand (i.e. value) by the customer—see also column 12 line 7-9.

**storing a committed capacity value representing a capacity of the first resource that at least one of a user associated with the factory and a user associated with a supplier agrees to provide the customer; and**

column 12 line 47-50, if sufficient resources exist, the customer is informed that their demand can be met, i.e. the committed capacity is booked (i.e. stored in memory) to that customer to ensure that their demand can be met. This value is associated with at a user associated with the factory--see column 13 line 42-46.

**generating a notification when the requested capacity value is different than the committed capacity value.**

column 12 line 47-55, a rich response to the customer (i.e. notification) is provided if the requested capacity value is different than the committed capacity value. If the customer requests a delivery commitment based on available factory resources and those resources are not available (i.e. the requested capacity value is different than the current committed capacity value), a notification is automatically generated.

Regarding **Claim 7**, Koski discloses:

**storing a contracted capacity value representing a maximum capacity of the first resource that the customer is allowed to request, and generating a notification when the requested capacity value exceeds the contracted capacity value.**

column 18 line 35-38, as discussed above, Koski provides storing capacity values of requested versus available resources for comparing demand values for customer order (i.e. resources) to the resources to allocate resources to those orders. Fixed resources are those which demand from customer orders cannot exceed and comprise a maximum the customer can request. If a customer order exceeds the available capacity of fixed resources, a notification is generated.

Regarding **Claim 8**, Koski discloses:

**storing an estimated capacity value representing an estimated capacity of the resource made by the customer; and**  
**generating a notification when the capacity value is different than the estimated capacity value.**

column 18 line 53-56, the cube world stores a calculation (i.e. estimated value) of the demand and resource values and automatically generates a notification when the demand and resource values are different.

Regarding **Claim 9**, Koski discloses:

**generating a notification when the capacity value exceeds the demand value.**

column 12 line 47-50, the system sends a rich response (i.e. notification) to the customer if the capacity value exceeds the demand value, i.e. the customer demand can be met.

Regarding **Claim 10**, Koski discloses:

**wherein the first and second resources are associated with different factories.**

column 13 line 49-51, the resources in the cube world (i.e. first and second resources) can be more than one physical location (i.e. different factories).

Regarding **Claim 11**, Koski discloses:

**wherein the first and second resources are associated with different suppliers.**

column 13 line 49-51, the resources in the cube world (i.e. first and second resources) can be more than one vendor (i.e. different suppliers).

Regarding **Claim 13**, Koski discloses:

**wherein at least one additional resource is associated with the factory, the additional resource operable to receive and process a second item from the first resource, the method further comprising:**

column 17 line 58-60, production equipment are resources (e.g. first production equipment, second production equipment) operable to receive and process a second item from a first resource –see Figure 2b.

**storing a demand value associated with the additional resource, the demand value for the additional resource based at least partially on the demand value for the first resource; and**

column 57-59, data associated with demand values associated with additional resources (as required for the ‘best path’ calculation) are stored. Since the cube world invention is storing values for a path, there is at least one additional resource whose capacity and assignment are stored in memory.

**propagating a change in the demand value for the first resource to the demand value for the additional resource, the change in the demand value for the first resource resulting in a change in the demand value for the additional resource.**

column 13 line 2 line 9, the cube world breaks down demand value into a series of process steps (e.g. ‘best path’) so that changes in demand value for a first resource are propagated throughout the process to subsequent resources allocated to address the demand.

**Claims 15-25, 27, 29-39, 41, 43-48** recite similar limitations as those recited in **Claims 1-11 and 13** above, and are therefore rejected under the same rationale.



***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claims 12, 26 and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Koski US 5,596,502**.

Regarding **Claim 12**, Koski teaches:

making the assignment, the capacity value, the demand value and the notification available to a user associated with the factory – as discussed above.

Koski teaches his invention being accessed through a personal computer and a network – see Figure 1.

Koski does not teach:

**storing at least one access privilege; and making the assignment, the capacity value, the demand value, and the notification available to a user associated with at least one of the customer, the factory, and a supplier based on the access privilege,**

Official Notice is taken that it is old and well known in the art of network design, such as disclosed by Koski, to provide security in terms of a logon and password (i.e.

Art Unit: 3623

access privilege). This is done to ensure that users who want to access the system have the proper clearance to do so.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Koski, regarding providing resource capacity and demand allocation on a computer network, to include the step of providing security access to said network, because it would ensure that users who want to access the system have the proper clearance.

**Claims 26 and 40** recite similar limitations as those recited in **Claim 12** above, and are therefore rejected under the same rationale.

16. **Claims 14, 28 and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Koski US 5,596,502** in view of **DeBusk US 5,991,728**.

Regarding **Claim 14**, Koski does not teach:

**further comprising providing a tree structure to the user in a display, the tree structure comprising the first resource, the additional resource, and at least the demand values for the first resource and additional resource.**

DeBusk teaches:

**further comprising providing a tree structure to the user in a display, the tree structure comprising the first resource, the additional resource, and at least the demand values for the first resource and additional resource.**

column 15 line 46-53, a nested diagram (i.e. tree structure) is provided to the user in a display. This tree structure lists a first resource of medical supplies used for a particular operation. The quantities of each type of resource is listed along with sub-bundles – see also Figures 8 and 9. The first and additional resources and demand values are displayed to identify what is needed for a medical procedure.

DeBusk and Koski both address tracking resources utilized to fulfill customer demand, thus both DeBusk and Koski are analogous art.

DeBusk teaches that providing nested grouping of resources required for a customer provide a standardization that ultimately results in lower inventory carrying costs (column 5 line 25-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Koski, regarding providing resource and capacity planning to include the step of providing a tree structure containing resource demands to allocate resources in a standardized way to fulfill customer orders, because it would result in standardization of resource groupings to lower inventory carrying costs.

**Claims 28 and 42** recite similar limitations as those recited in **Claim 14** above, and are therefore rejected under the same rationale

### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rosenberg, Jerry M; Dictionary of Computers, Information Processing & Telecommunications, 2<sup>nd</sup> Edition, 1987, p. 456.

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 3623

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JGS 12-30-2005



TARIQ R. HAFIZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600